BRIEF REPORT: BEYOND THE PRIMARY INFLUENCES OF PARENTS AND PEERS ON VERY YOUNG ADOLESCENT ALCOHOL USE: EVIDENCE OF INDEPENDENT COMMUNITY ASSOCIATIONS

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ABSTRACT

This study examined the extent to which alcohol use by very young adolescents (mean age 12 years) was related to alcohol-related norms and law enforcement of underage alcohol use, after accounting for known strong parent and peer correlates. Our sample consisted of 7,674 students from 30 Australian communities. Two-level (individuals nested within communities) binary logistic regression was used to examine relationships between recent alcohol use (last 30 days) and perceived community norms about alcohol use, perceived law enforcement of underage alcohol use, parent alcohol use, parent permissiveness of adolescent alcohol use, peer alcohol use, and demographic factors.. Results indicated thatcommunity norms and perceived law enforcement of alcohol use were associated with alcohol use and this association was independent of parent and peer factors. After accounting for proximal social correlates, community factors were significantly associated with alcohol use among very young adolescents.

Key Words: adolescents, young, children, alcohol use, neighbourhood, community, family, parent, peer

INTRODUCTION

In Western countries, research on adolescent alcohol use has focused on the middle adolescent years (14-18 years), commensurate with the very high prevalence rates of alcohol use and misuse for this age group and its prediction of harmful adult alcohol use (Johnston, O'Malley, Bachman, & Schulenberg, 2010; White & Smith, 2009). However, for a substantial minority, alcohol use and misuse begins during early adolescence (10-13 years old). Across 39 countries (Europe and North America), 14% of 15 year olds report their first episode of intoxication at age 13 years or younger (Currie et al., 2012). In Australia, available data indicate that around 40% of 12 year olds have consumed an alcoholic drink in the past year (Hayes, Smart, Toumbourou, & Sanson, 2004), and 6% of 13 year olds report consuming five or more standard drinks on at least one occasion in the past two weeks (Kelly et al., 2011b). The prevalence of alcohol use and misuse amongst early adolescents is a major public health and safety concern because of significant links between early adolescent alcohol use and subsequent short and long-term alcohol-related harm (Lubman & Yucel, 2008; Masterman & Kelly, 2003).

Largely driven by *Social Learning Theory* (Bandura, 1969; Bandura, 1999), research on social systems and adolescent alcohol use has focused on parents and peers. Consistent with this theory , parental permissiveness of alcohol use (low monitoring/supervision, supply of alcohol) (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Kelly et al., 2011a; Kelly et al., 2011b) and parents' own use of alcohol (Kelly et al., 2011b) are established predictors of early onset and development of alcohol use. Parent influences may be stronger during the early adolescent years compared to older years, because adolescence is associated with progressively less time spent with the family and greater emotional autonomy (Renk et al., 2003). Peer alcohol use is also a

strong correlate of adolescent alcohol use (e.g., Ali & Dwyer, 2010; Barnes et al., 2006). Adolescents are socialized by peers who consume alcohol and select friends who are similar in terms of substance use (Trucco, Colder, & Wieczorek, 2011).

Primary Socialization Theory (Oetting, Donnermeyer, & Deffenbacker, 1998) integrates family and peer influences within a broader community context by proposing that community factors indirectly influence adolescents through their effects on proximal social systems like families and immediate peer groups. We identified four recent studies that have examined community factors associated with adolescent alcohol use. Based on a sample of mid-adolescents (mean 15.7 years), Paschall, Grube, Thomas, Cannon, and Treffers (2012) found that underage drinking law enforcement activities and parent disapproval of alcohol use were significant correlates of past-year alcohol use. Based on a similarly aged sample (mean 16.3 years), Song, Smiler, Wagoner, and Wolfson (2012) found that law enforcement of underage alcohol use was significantly associated with adolescent alcohol use, but a measure of the extent to which their community cared about underage alcohol use was not. Two studies have examined the extent to which community norms and parent factors together predict adolescent alcohol use, and there is variation in key findings. Lipperman-Kreda, Grube, and Paschall (2010) found that community norms about underage alcohol use and perceived law enforcement were not directly associated with alcohol use, but indirectly predicted alcohol use via their association with parent and peer factors. In contrast, Jones, Feinberg, Cleveland, and Cooper (2012) found that community protection (combination of alcohol-related norms and law enforcement), family risks (combination of history of substance use, attitudes favorable to substance use and antisocial behavior), and involvement with antisocial peers, were independently related to alcohol use in

older adolescents. In sum, there is good evidence that community norms and law enforcement are implicated in adolescent alcohol use. However, the extent to which effects for very young adolescents are independent of key parent and peer factors is unclear. Broader community influences may be less important for very young adolescents, given that parent influences and susceptibility to peer influences may be stronger than for older adolescents (Kelly et al., 2012).

The aim of this study was to further investigate the extent to which community factors (alcohol-related norms and law enforcement of underage alcohol use) predict alcohol use during early adolescence (mean age 12 years), independent of the known significant proximal influences of parents and peers. At the heart of the question is the extent to which early adolescents are influenced by broader social systems independent of parents and peers, or whether parents and peers are the primary means by which community factors influence early adolescent alcohol use. In essence, this study explores the potentially uncomfortable reality that although parent and peer influences are likely to be strong, early adolescents are not insulated from broader (community) influences (Anderson, Bruijn, Angus, Gordon, & Hastings, 2009). In the present study, we hypothesized that perceived alcohol-related community norms and law enforcement would be significantly associated with alcohol use in 10-14 year olds, after accounting for the known strong effects of parents and peers.

METHOD

Sample

The initial sample consisted of 7866 adolescents (52.6% female) in Grade 6 (54.7%; last year of primary school in the State of Victoria and second last year of primary school in Queensland and Western Australia, modal age 11) and Grade 8 (second year of high school in Victoria and first

year of high school in Queensland and Western Australia, modal age 12). Participants who were positively identified as recording unreliable responses (*n* = 151) or who had missing data on the alcohol use item (dependent variable, *n* = 41) were excluded. As a check on the reliability of responses, there were two questions asking about the use of a fictitious drug and each participant was asked "How honest were you in filling out this survey?" Participants who reported being not honest at all or using a fictitious drug were excluded (*n* = 151). A further 41 participants were excluded due to missing data on the alcohol use item (dependent variable).Five hundreds and eight participants had missing values in one or more covariates and multiple imputation was used to fill in missing values. The final sample size was 7674.

For the overall sample, 19.7% of adolescents reported recent alcohol use (1+ occasions in the last 30 days), and 80.3% reported no recent alcohol use. The sample was evenly split between urban (50.03%) and regional (non-metropolitan) areas, and about half of mothers and fathers had finished high school (55% of mothers, 49% of fathers). Of the total sample, 15% of adolescents reported that their father did not consume alcohol and 25% reported that their father consumed alcohol most days. In terms of maternal alcohol use, 25% of adolescents reported that their mother did not consume alcohol and 11% reported that their mother consumed alcohol most days. Descriptive statistics for the full sample are presented in Table 1.

[INSERT TABLE 1 ABOUT HERE]

Tests for differences between participants with complete data (included in the analyses) and those with incomplete data suggested the sample included in the analyses were broadly representative of respondents. Participants with missing data were less likely to have parents who had completed high school or had a university degree (Mother's education: $\chi^2(2) = 48.29$, *p*

< .001; Father's education: χ^2 (2) = 58.23), were more likely to report having a non-drinking father, χ^2 (2) = 12.58, p < .01, were more likely to be in Grade 6, χ^2 (1) = 11.73, p < .01, and were less likely to come from Victoria, χ^2 (1) = 6.25, p < .01. There were no differences between participants with complete data and incomplete data in terms of alcohol use, perceived alcohol-related community norms, perceived law enforcement of underage alcohol use, regionality, socioeconomic status, mother's drinking, birthplace, peer alcohol use, and parental permissiveness towards adolescent alcohol use (p > .05).

Survey procedure

The original survey involved a two-stage sampling strategy (community and school) in which 231 schools in 30 communities in three States of Australia were selected (Victoria, Queensland, and Western Australia). The community sampling framework consisted of Statistical Local Areas (ABS, 2009) with greater than 17,000 inhabitants. These Statistical Local Areas were stratified into quartiles of socioeconomic disadvantage based on Socio-Economic Indexes for Areas (SEIFA) (ABS, 2009). Eligible communities were randomly selected from SEIFA quartiles to represent State distributions in advantage/disadvantage as well as urban and nonurban locations. Within each community, primary (n = 164) and secondary schools (n = 82) were randomly selected. Of the schools invited to participate, 83% (n = 443) responded, and of these, 52% agreed to participate (59% and 43% at Grade 6 and 8 levels respectively). Participants only participated if signed parent consent was obtained (67% response rate). The survey was web-based and completed during school class time (paper copies were provided when computer resources were not available). The survey was approved by the University of Melbourne Human Research Ethics Committee and use of the survey data was approved by the University of

Queensland Human Research Ethics Committee. Further details of the survey methods are described elsewhere (Hemphill et al., 2010).

Measures

The measures were from the Communities That Care Youth Survey, an epidemiological assessment instrument developed in the United States (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002) and adapted for Australian youth populations (Bond, Thomas, Toumbourou, Patton, & Catalano, 2000).

Alcohol use. This was measured with the item "In the past 30 days, have you ever had more than just a few sips of an alcoholic drink?" (Never/ 1 or 2 times/ 3-5 times/ 6-9 times/ 10 or more times). Due to low frequency at the higher levels of alcohol use, particularly for Grade 6 children, outcomes were recoded to 0 "No" and 1 "1 or more times".

Community variables. *Perceived alcohol-related community norms* were measured using the item "How wrong would most adults (over 21) in your neighbourhood think it is for kids your age to drink alcohol?" The response scale was *1* 'Not wrong at all', *2* 'A little bit wrong', *3* 'Wrong' and *4* 'Very wrong'. *Perceived law enforcement* of underage alcohol use was measured with the item 'If a kid drank some alcohol (like beer, wine or spirits) would he or she be caught by the police?' The response scale was a 4-point Likert scale 1 'YES!', 2 'yes', 3 'no' and 4 'NO!'. The latter scale was reverse coded so that higher score reflected a greater perceived likelihood of law enforcement of underage alcohol use.

Parent influences. *Parental alcohol use* was assessed with the item: "Does your mother/ father drink alcohol?" (1 'Never', 2 'Occasionally', 3 'Most days' and 4 'Every day'). *Parent permissiveness* towards alcohol use was measured with two items "How wrong do your parents

feel it would be for you to drink beer or wine regularly/ drink spirits regularly?" (*1* 'Not wrong at all', *2* 'A little bit wrong', *3* 'Wrong' and *4* 'Very wrong'). *Peers' drinking* was measured with the item "In the past year (12 months), how many of your 4 best friends have tried alcohol (like beer, wine or spirits) when their parents didn't know about it?" (*1* 'None of my friends', *2* '1 of my friends', *3* '2 of my friends', 4 '3 of my friends' and 5 '4 of my friends').

Control variables. *Grade* was dummy coded 0 'Grade 6' and 1 'Grade 8'. *Gender* was dummy coded 0 'Male' and 1 'Female'. Maternal and paternal highest levels of education were assessed using a 4-point scale (*1* 'Didn't complete high school', *2* 'Completed high school', *3* 'Has a degree from university' and *4* 'I don't know'). This variable was recoded as 1 'Completed high school', 2 'Completed high school/ had a degree from University', 3 'I don't know/ missing'. This variable was treated as categorical variable in the analysis. *Birthplace* was determined from the item 'In which country were you born?' (*0* 'Australia' and *1* 'another country'). Socieconomic status (higher scores reflecting relative advantage) and regionality (urban/rural) were based on Australian Bureau of Statistics population census data (described above).

Because there are differences in education systems between Victoria and the other two states (Western Australia and Queensland), Victorian participants entered high school at Grade 7 and participants from the other two states entered high school at Grade 8. Therefore, participants from the State of Victoria were dummy coded as 0 (where high school starts in Grade 7) and other states were coded as 1 (where high school starts in Grade 8).

Analysis

Statistical analyses were performed with STATA 11. The statistical design was a two-level binary logistic regression (individual [*n* = 7674] nested within community [*n* = 30]), with random

intercepts estimated for community, and recent alcohol use as the dependent variable. The key independent variables were perceived community norms, perceived law enforcement, parental permissiveness, parent alcohol use, and peer alcohol use. All these variables were measured at the individual level. Socio-economic index for area, regionality and states were entered into the model at the community level. The analyses consisted of univariate (unadjusted) logistic regressions, and a multivariate (adjusted) logistic regression. In the unadjusted model, independent variables were entered separately and in the adjusted model, all variables were entered in one step. In all the models, the nested structure of the data was accounted for.

RESULTS

Prior to key analyses, adolescents who had recently consumed alcohol and those who had not were compared on categorical and continuous variables (see Table 1). More males than females consumed alcohol ($p < .001$), and as expected, Grade 8 students were more likely to consume alcohol than Grade 6 students ($p < .001$). Rural students were more likely to consume alcohol than urban students ($p < .01$), but the percentage difference between urban and rural alcohol use was small (2.7%). Adolescents in the lowest and highest quartiles of socioeconomic disadvantage were less likely to use alcohol. Adolescents in Victoria were more likely to have recently consumed alcohol compared to Queensland and Western Australia ($p < .001$). When parental education was lower, higher levels of alcohol use were reported ($p < .001$). Alcohol use was more likely when parents consumed alcohol at increasing frequency ($p < .001$). These significant relationships between the above variables and adolescent alcohol use justified the inclusion of these controls in subsequent analyses. Correlations between all covariates (Pearsons *r* for continuous covariates, Spearmans *rho* for ordinal covariates) were generally small ($r < .3$),

with medium-sized correlations (0.3 < *r* < 0.6) observed between perceived alcohol-related community norms and peer alcohol use (*r* = -0.3), between grade level and peer alcohol use (*r* = .36), between perceived alcohol-related community norms and parent permissiveness (*r* = -.39), and between parent permissiveness and peer alcohol use (*r* = .33). Correlations suggested that the community variables of interest in this study had only modest associations with parent permissiveness and peer alcohol use, and had only small associations with parental alcohol use.

[INSERT TABLE 1 ABOUT HERE]

The unadjusted logistic regressions for univariate relationships between adolescent recent alcohol use and each independent variable are presented in Table 2. The key results were that perceived community alcohol-related norms against alcohol use and stronger law enforcement of underage alcohol use were protective (*p* < .001). Maternal and paternal alcohol use, parent permissiveness of alcohol use, peer alcohol use, being in Grade 8, and being male were all associated with an increased risk of recent alcohol use (generally at *p* < .001). Being born overseas, residing in Queensland or Western Australia (compared to Victoria), and parental completion of high school (compared to not completing high school) were all protective (*p* < .05). Socio-economic indices for area and regionality were not significantly related to recent alcohol use (*p* > .05).

[INSERT TABLE 2 ABOUT HERE]

Before fitting a multilevel logistic model, a variance component model using the same dependent variable (past 30 days alcohol use: yes/no) was fitted to assess the variation in alcohol use between communities. Results indicated that there was a significant amount of random variance at community level, $\sigma_u^2 = 0.09$, SE = 0.03, chi square = 58.25, *p* < .001, with 2.7% of

variance in alcohol use due to variation between communities. Table 2 presents the results of the multiple logistic regressions, where each odds ratio was adjusted for the effects of all other independent variables. Community norms against alcohol use, perceived law enforcement and being female were significantly associated with lower risk of adolescent alcohol use ($p < .001$). Both maternal and paternal alcohol use were significant predictors of adolescent alcohol use ($p < .001$). Peer alcohol use and parental permissiveness remained significant predictors of adolescent alcohol use ($p < .001$). Parent education, being in Grade 8, being born overseas, and State of residence were no longer significant in the multiple regression ($p > .05$), and community level variance in adolescent alcohol use became non-significant (beta coefficient = .06, standard error = .07) after the introduction of covariates into the model.

Because of skewness on the variables *alcohol-related community norms, peer alcohol use*, and *parental permissiveness*, supplementary analyses were conducted to check the robustness of the results. Continuous variables were logarithmically transformed in the case of positive skew and exponentiated in the case of negative skew, and an identical model to the above was repeated with the three continuous variables recorded as binary scores. The significance of results for each independent variable were unchanged, so the results for logistic regressions using continuous and untransformed scores were considered robust to skewness.

DISCUSSION

The key findings of this study confirmed the hypothesis that perceived community alcohol-related norms and perceived law enforcement were significantly associated with adolescent alcohol use. These effects were maintained after adjustment for parent and peer factors known to be strongly related to adolescent alcohol use. The findings point to the

importance of community variables as independent associates of very young adolescent alcohol use. This contrasts with the predictions of Primary Socialization Theory, which proposes that community factors provide a context in which proximal factors may operate. The study is consistent with the possibility that parents and peers are not the sole conduit of influence on very young adolescent alcohol use.

The present study extends recent research on community factors and adolescent alcohol use in two ways. First, most prior research has not examined the extent to which community factors are related to adolescent alcohol use after accounting for key parent and peer factors. In contrast with earlier research (Lipperman-Kreda et al., 2010), the findings of this study suggest that community factors may have direct associations with very young adolescent alcohol use. Second, the study fills a gap in knowledge about the association of community factors and very young adolescent alcohol use. While community factors (most notably law enforcement of underage alcohol use) have generally been found to be associated with alcohol use in older adolescent samples (Paschall et al., 2012; Song et al., 2012), this study found that community factors are important correlates of alcohol use at an earlier developmental stage. While causal directions cannot be established in this cross-sectional study, several potential mechanisms may account for this association. Very young adolescents may be at less risk of alcohol involvement when perceptions of community disapproval are strong, or very young adolescents who engage in alcohol use may change their perceptions of community norms based on personal alcohol-related outcomes. In Australia, alcohol use at 12 years of age (the mean for this sample) is non-normative. It may be the case that adolescents who consume alcohol at this age have a broader profile of antisocial behaviour, and are resistant to protective community influences that operate

for adolescents without these profiles. Of course, it is also possible that the families of low risk adolescents tend to select into communities that have lower risk profiles, including more effective law enforcement and fewer problems with underage alcohol use.

The study has several implications for the prevention of alcohol use and misuse in very young adolescents. While longitudinal research is needed to pinpoint directional paths, prevention programs that conjointly target community, family, and peer group vulnerabilities may be important. Currently there is very good evidence that interactive and skills-oriented school-based prevention programs are effective, and there is emerging evidence that family-based prevention programs are effective. There is also solid evidence that community-based prevention programs that aim to strengthen community norms against underage alcohol use are effective (Salom, Holman, Connor, Toumbourou, & Kelly, in press). Despite the evidence for family and community-level prevention programs, these types of programs remain underutilised. In term of alcohol-related policing, some Australian states have recently introduced legislation targeting adult provision of alcohol in private settings and private party registration protocols, and these may serve to enhance adolescent perceptions of effective law enforcement. The results of this study add to the weight of evidence that community-level prevention programs and legislation may be important collateral strategies to reduce alcohol-related risks in very young adolescents.

As previously noted, the findings of the present study are limited by the cross-sectional design of the study, making statements about causal directionality impossible. The study is not able to address whether the scope of the community variables represent perceptions of the local neighbourhood or broader societal norms. The findings would be strengthened by utilising

community measures that are independent of adolescent self-reported alcohol use. The findings of this study are limited to alcohol use rather than misuse. While extant research in this area has used latent variables that have indicators of both alcohol use and misuse (Lipperman-Kreda et al., 2010), the proportions of Grade 6 adolescents in the present sample that engaged in heavy alcohol use were too small for statistical analysis. The rate of exclusion because of no parental consent was higher than the rate of exclusion because of missing values, so it is likely that the biases associated with the parental consent may be stronger than any biases associated with missing data. While we excluded participants on the basis of honesty estimates, the study relies on self-report data.

CONCLUSION

Perceived community alcohol-related norms and perceived law enforcement of underage alcohol use were associated with alcohol use in very young adolescents, and these factors were independent of parent and peer factors known to be strongly related to alcohol use in this group. The results provide additional reinforcement of the potential utility of multi-level prevention policies and programs for very young adolescents.

Table 1.

Descriptives for all predictors split by recent alcohol use (yes/no).

	Recent alcohol use				
	Yes		No		
	Frequency	%	Frequency	%	Chi-sq
Gender					
Male	874	24.06	2759	75.94	83.22***
Female	637	15.76	3404	84.24	
Grade					
6	596	14.19	3605	85.81	177.75***
8	915	26.35	2558	73.65	
Region					
Urban	706	18.40	3130	81.60	8.01**
Rural	805	20.97	3033	79.03	
SEIFA					
1st quartile	353	18.97	1508	81.03	16.73**
2nd quartile	372	20.93	1405	79.07	
3rd quartile	409	22.04	1447	77.96	
4th quartile	377	17.29	1803	82.71	
State					
Victoria	795	22.11	2800	77.89	26.34***
Queensland	413	18.16	1861	81.84	
Western Australia	303	16.79	1502	83.21	
Mother's education					
Not completed high school	305	23.05	1018	76.95	20.12***
Completed high school	837	20.05	3338	79.95	
Don't know	352	16.89	1732	83.11	

Father's education					
Not completed high school	363	24.95	1092	75.05	34.00***
Completed high school	705	19.10	2987	80.90	
Don't know	418	17.43	1980	82.57	
Mother's drinking					
Never	187	9.98	1686	90.02	226.22***
Occasionally	1035	20.99	3895	79.01	
Most days	282	34.18	543	65.82	
Father's drinking					
Never	93	8.28	1030	91.72	250.14***
Occasionally	808	17.83	3723	82.17	
Most days	578	30.84	1296	69.16	
	Mean	SD	Mean	SD	*t*
Perceived community norms against alcohol use	2.85	1.01	3.47	0.86	23.74***
Perceived law enforcement of underage alcohol use	2.29	0.89	2.72	0.94	16.25***
Number of drinking peers	1.69	1.64	0.42	0.96	39.03***
Parent permissiveness of alcohol use	1.97	0.88	1.31	0.62	33.83***

*$p < .05$; **$p < .01$; ***$p < .001$. SEIFA = socioeconomic index for areas.

Table 2. *Odds ratios estimates and their associated 95% confidence intervals from the adjusted and unadjusted model*.

	Adolescent alcohol use			
	Unadjusted OR	95% CI	Adjusted OR	95% CI
Key variables				
Community				
Perceived community norms against alcohol use	0.54***	(0.51 - 0.57)	0.82***	(0.75 - 0.89)
Perceived law enforcement of underage alcohol use	0.61***	(0.57 - 0.65)	0.84***	(0.77 - 0.90)
Family				
Mother's drinking (Ref: Never)				
Occasionally	2.32***	(1.96 - 2.74)	1.65***	(1.35 – 2.01)
Most days	4.59***	(3.70 - 5.67)	1.97***	(1.51 - 2.57)
Father's drinking (Ref: Never)				
Occasionally	2.30**	(1.83 - 2.89)	1.64***	(1.26 - 2.14)
Most days	4.72***	(3.73 - 5.97)	2.18***	(1.65 - 2.90)
Parent permissiveness of alcohol use	2.84***	(2.65 – 3.07)	2.03***	(1.87 - 2.21)
Peers				
Number of drinking peers	1.97***	(1.88 - 2.05)	1.68***	(1.59 - 1.76)
Controls				
Grade 8	2.16***	(1.92 - 2.43)	0.94	(0.81 - 1.09)
Female	0.58***	(0.52 - 0.65)	0.61***	(0.53 - 0.69)
Born overseas	0.68**	(0.54 - 0.86)	0.89	(0.68 - 1.15)
Regionality	1.22	(0.97 - 1.55)	1.10	(0.96 - 1.27)
Socio-economic indices for area (Ref: Least advantaged – 1st quartile)				
SEIFA 2nd quartile	1.22	(0.89 - 1.68)	1.11	(0.91 - 1.35)
SEIFA 3rd quartile	1.29	(0.93 - 1.78)	1.11	(0.92 - 1.32)
SEIFA 4th quartile	0.91	(0.66 - 1.25)	0.92	(0.76 - 1.11)

Mother's education (Ref: Not completed high school)				
Completed high school	0.83*	(0.71 - 0.96)	0.97	(0.80 - 1.17)
Don't know	0.69***	(0.58 - 0.77)	0.88	(0.70 - 1.12)
Father's education (Ref: Not completed high school)				
Completed high school	0.72***	(0.63 - 0.84)	0.92	(0.76 - 1.10)
Don't know	0.66***	(0.56 - 0.77)	1.00	(0.80 - 1.25)
State (Ref: Victoria)				
Queensland or Western Australia	0.76*	(0.61 - 0.95)	0.90	(0.79 - 1.03)

*$p < .05$; **$p < .01$; ***$p < .001$

OR = odds ratio. SEIFA = socioeconomic index for areas. CI = confidence interval.

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